I hereby certify that this correspondence is being filed via EFS-Web with the United States Patent and Trademark Office on 22 February 2010.

TOWNSEND and TOWNSEND and CREW LLP

By: /Megan McCoy/
Megan McCoy

PATENT
Docket No.: 082368-004000US
Client Ref. No.: E1-A0203P-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Yasuko NAKAGAWA et al.

Patent No.: 7,662,270

Issued: November 24, 2009

Application No.: 10/532,264

For: GENE EXPRESSED SPECIFICALLY IN DOPAMINE-PRODUCING NEURON PRECURSOR CELLS AFTER TERMINATION OF DIVISION

Customer No.: 20350

Confirmation No.: 4474

Examiner: KOLKER, Daniel E.

Art Unit: 1649

REQUEST FOR CERTIFICATE OF CORRECTION UNDER §1.322

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

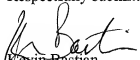
Commissioner:

Pursuant to 37 CFR §1.322 Applicant submits a Certificate of Correction correcting errors within the claims attributable solely to the Office. The desired corrections are set described on enclosed form PTO/SB/44 and are supported by the July 13, 2009 Notice of Allowability with Examiner's Amendment (*see* Examiner's Amendment under "4. In the claims:" and the April 23, 3009 Amendment showing the contents of the claims referenced in the Examiner's Amendment.

Patentees respectfully request correction of the instant issued patent as described on the attached Certificate of Correction and insertion of the Certificate at the end of the patent.

It is believed that no fee is required for this Request For Certificate of Correction as the error is the result of an inadvertent mistake made by the United States Patent and Trademark Office. However, if a fee is required, the Commissioner is authorized to charge said fee to the undersigned's Deposit Account No. 20-1430

Respectfully submitted,



Kevin Bastian
Reg. No. 34,774

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: (415) 576-0200
Fax: (415) 576-0300
KLB:m4m

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,622,270

APPLICATION NO.: 10/532,264

ISSUE DATE : November 24, 2009

INVENTOR(S) : Nakagawa et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 1, line 65, please delete "Steroli's" and insert –Sertoli's--.

At column 63, Claim 1, (iv), lines 25-27, please delete "or a fragment of said polypeptide comprising at least eight amino acid residues; and".

At column 64, claim 6, (iv), lines 24-26, please delete "or a fragment of said polypeptide comprising at least eight amino acid residues; and".

At column 63, claim 10, (i), line 43, please delete "ED" and insert –ID--.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

TOWNSEND AND TOWNSEND AND CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, CA 94111-3834

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	10/532,264	NAKAGAWA ET AL.	
	Examiner	Art Unit	
	DANIEL KOLKER	1649	

All Participants:

(1) *Daniel Kolker (USPTO)*.

(2) *Kevin Bastian (attorney for applicant)*.

Status of Application: *Allowable after exmr amendmnt*

(3) _____.

(4) _____.

Date of Interview: *6 July 2009*

Time: _____

Type of Interview:
☒ Telephonic
☐ Video Conference
☐ Personal (Copy given to: ☐ Applicant ☐ Applicant's representative)

Exhibit Shown or Demonstrated: ☐ Yes ☒ No
If Yes, provide a brief description: .

Part I.

Rejection(s) discussed:

Claims discussed:
29,32,41-44

Prior art documents discussed:

Part II.

SUBSTANCE OF INTERVIEW DESCRIBING THE GENERAL NATURE OF WHAT WAS DISCUSSED:
See Continuation Sheet

Part III.

☒ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview directly resulted in the allowance of the application. The examiner will provide a written summary of the substance of the interview in the Notice of Allowability.
☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview did not result in resolution of all issues. A brief summary by the examiner appears in Part II above.

/Daniel E. Kolker/
Primary Examiner, Art Unit 1649
July 9, 2009

(Applicant/Applicant's Representative Signature – if appropriate)

Continuation of Substance of Interview including description of the general nature of what was discussed: On 6/30/09 examiner called Mr. Bastian and discussed possible amendments. Examiner faxed proposed amendments, including 3 options for amending independent claims 29 and 32. On 7/609 Mr. Bastian left a voicemail with Examiner Kolker indicating that the proposed amendments were accepted, and indicating that option 3 of the three options presented was acceptable. Copies of the changes agreed upon are included in this office action.

Notice of Allowability	Application No.	Applicant(s)	
	10/532,264	NAKAGAWA ET AL.	
	Examiner	Art Unit	
	DANIEL KOLKER	1649	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *4/23/09*.

2. ☒ The allowed claim(s) is/are *29-32,34-35,41-44*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *20090630A* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Daniel E. Kolker/
Primary Examiner, Art Unit 1649
July 9, 2009

EXAMINER'S AMENDMENT

1. The remarks and amendments filed 23 April 2009 have been entered. Claims 29 - 32, 34-35, and 41-44 are pending.

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kevin Bastian on 6 July 2009. Examiner Kolker had faxed proposed amendments to Mr. Bastian on 30 June 2009; on 6 July 2009 Mr. Bastian left a voicemail message indicating that the amendments were approved.

The application has been amended as follows:

3. In the specification:

At p. 1, line 1, the title has been changed to:

- - Methods of isolating dopaminergic neuron precursor cells - - -

4. In the claims:

In claim 29, line 3, delete "a cell sample thought to a comprise a dopaminergic neuron precursor cell" and replace with - - a cell sample comprising ventral midbrain cells - - -

In claim 29, lines 4-5, change "antibody that binds to:

(a) a polypeptide" to

- - antibody that binds to a polypeptide - - -

In claim 29, delete part (iii) and replace with - - (iii) a nucleotide encoding residues 18 - 700 of SEQ ID NO:3 or residues 18 - 650 of SEQ ID NO:4 - - -

In claim 29, part (iv), change "3 or 4; or" to - - 3 or 4; and - - - .

In claim 29, delete part (b).

In claim 32, line 3, delete "a cell sample thought to a comprise a dopaminergic neuron precursor cell" and replace with - - a cell sample comprising ventral midbrain cells - - -

In claim 32, lines 4-5, change "antibody that binds to:

(a) a polypeptide" to

- - antibody that binds to a polypeptide - - -

In claim 32, delete part (iii) and replace with - - (iii) a nucleotide encoding residues 18 - 700 of SEQ ID NO:3 or residues 18 - 650 of SEQ ID NO:4 - - -

In claim 32, part (iv), change "80% more" to - - 80% or more - - -

In claim 32, part (iv), change "3 or 4; or" to - - 3 or 4; and - - - .

In claim 32, delete part (b).

In claim 41, line 2, delete the words "of (a)".

In claim 42, line 2, delete the words "of (a)".

In claim 43, line 2, delete the words "of (a)".

In claim 43, delete part (iii) and replace with - - (iii) a nucleotide encoding residues 18 - 700 of SEQ ID NO:3 or residues 18 - 650 of SEQ ID NO:4 - - -

In claim 44, line 2, delete the words "of (a)".

In claim 44, delete part (iii) and replace with - - (iii) a nucleotide encoding residues 18 - 700 of SEQ ID NO:3 or residues 18 - 650 of SEQ ID NO:4 - - -

The above amendments correct claim dependency (deletion of notation (a) and (b) within the independent claims) and grammatical errors (changing "80% more" to "80% or more"). Support for the amendments to claims 29 and 32, line 3 of each, can be found at p. 4 lines 5 - 8 of the specification.

The amendments to claims 29, 32, 43-44, part (iii) of each claim is to clarify which specific residues of SEQ ID NO:3 and 4 are referred to by the "signal sequence portion" language. Support for these changes can be found in the specification, at p. 6 lines 30-34 (the first 17 residues of SEQ ID NO:3 and 4 are the signal sequences, therefore residue 18 is the first residue after the signal sequence) and the sequence listing as originally filed (SEQ ID NO:3 is 700 amino acids, SEQ ID NO:4 is 650 amino acids).

5. The following is an examiner's statement of reasons for allowance: neither Carulli WO 01/98630 nor Sun 2003 teaches or suggests that the relevant protein is expressed in ventral midbrain cells. In fact, Sun 2003 characterized the Kirrel2 protein as being specific to β cells of the pancreas (see whole paper) and did not detect mRNA encoding the protein in brain (Figure 1). Thus selecting a particular brain area, namely the ventral midbrain as recited in claims 29 and 32 as amended, would not have been obvious to one of ordinary skill in the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL KOLKER whose telephone number is (571)272-3181. The examiner can normally be reached on Mon - Fri 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Stucker can be reached on (571) 272-0911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel E. Kolker/
Primary Examiner, Art Unit 1649
July 8, 2009

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claim # of US Pat.:

1.-28. (Cancelled)

29. (Currently Amended) A method of selecting a dopaminergic neuron precursor cell, wherein the method comprises:

Claim 1

contacting a cell sample thought to comprise a dopaminergic neuron precursor cell with an antibody that binds to:

(a) a polypeptide encoded by a polynucleotide comprising a sequence selected from

(i) a nucleotide sequence comprising nucleotides 178 to 2280 of SEQ ID NO: 1 or nucleotides 127 to 2079 of SEQ ID NO: 2;

(ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 3 or 4;

(iii) a nucleotide sequence encoding an amino acid sequence in which a signal sequence portion is deleted in the amino acid sequence of SEQ ID NO: 3 or 4; and

(iv) a nucleotide sequence encoding an amino acid sequence which has 80% or more identity with the amino acid sequence of SEQ ID NO: 3 or 4; ~~and,~~ or

~~(v) a nucleotide sequence that hybridizes under stringent conditions with the complement of the nucleotide sequence of (i), wherein the stringent conditions include post hybridization washing of three times in 2x SSC/0.1% SDS at room temperature for 20 minutes each, and three times in 1x SSC/0.1% SDS at 37°C for 20 minutes each, and finally twice in 1x SSC/0.1% at 50°C for 20 minutes each, and the nucleotide sequence~~

~~encodes a protein having a single transmembrane domain and five Ig domains; or~~

(b) a fragment of said polypeptide comprising at least eight amino acid residues; and

~~selecting~~ isolating the dopaminergic neuron precursor cell, wherein the dopaminergic neuron precursor cell has bound to the antibody.

Claim # of US Pat.:

30. (Previously Presented) The method according to claim 29, wherein the method comprises the step of separating the dopaminergic neuron precursor cell by flow cytometry.

Claim 2

31. (Previously Presented) The method according to claim 29, wherein the antibody binds to an extracellular region of the polypeptide.

Claim 3

32. (Currently Amended) A method of producing a cell population comprising dopaminergic neuron precursor ~~cell~~ cells, wherein the method comprises contacting a cell sample thought to comprise [[a]] the dopaminergic neuron precursor ~~cell~~ cells with an antibody that binds to:

Claim 6

(a) a polypeptide encoded by a polynucleotide comprising a sequence selected from

(i) a nucleotide sequence comprising nucleotides 178 to 2280 of SEQ ID NO: 1 or nucleotides 127 to 2079 of SEQ ID NO: 2;

(ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 3 or 4;

(iii) a nucleotide sequence encoding an amino acid sequence in which a signal sequence portion is deleted in the amino acid sequence of SEQ ID NO: 3 or 4; and

(iv) a nucleotide sequence encoding an amino acid sequence which has 80% more identity with the amino acid sequence of SEQ ID NO: 3 or 4; ~~and,~~ or

~~(v) a nucleotide sequence that hybridizes under stringent conditions with the complement of the nucleotide sequence of (i), wherein the stringent~~

~~conditions include post-hybridization washing of three times in 2x SSC/0.1% SDS at room temperature for 20 minutes each, and three times in 1x SSC/0.1% SDS at 37°C for 20 minutes each, and finally twice in 1x SSC/0.1% at 50°C for 20 minutes each, and the nucleotide sequence encodes a protein having a single transmembrane domain and five Ig domains; or~~

(b) a fragment of said polypeptide comprising at least eight amino acid residues; and

~~obtaining~~ isolating the cell population comprising dopaminergic neuron precursor cells, wherein the dopaminergic neuron precursor cells have bound to the antibody.

Claim # of US Pat.:

33. (Cancelled)

Claim 7

34. (Previously Presented) The method according to claim 32, wherein the method comprises the step of separating the dopaminergic neuron precursor cell by flow cytometry.

Claim 8

35. (Previously Presented) The method according to claim 32, wherein the antibody binds to an extracellular region of the polypeptide.

36.-40. (Cancelled)

Claim 4

41. (Previously Presented) The method according to claim 29, wherein the nucleotide sequence of (iv) of (a) encodes a protein having the amino acid sequence having 95% or more identity with the amino acid sequence of SEQ ID NO: 3 or 4.

Claim 9

42. (Previously Presented) The method according to claim 32, wherein the nucleotide sequence of (iv) of (a) encodes a protein having the amino acid sequence having 95% or more identity with the amino acid sequence of SEQ ID NO: 3 or 4.

Claim # of US Pat.:

43. (Currently Amended) The method according to claim 29, wherein the

Claim 5 polypeptide of (a) is encoded by a polynucleotide comprising a sequence selected from the group consisting of:

(i) a nucleotide sequence comprising nucleotides 178 to 2280 of SEQ ID NO: 1 or nucleotides 127 to 2079 of SEQ ID NO: 2;

(ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: [[4]] 3 or 4; and

(iii) a nucleotide sequence encoding an amino acid sequence in which a signal sequence portion is deleted in the amino acid sequence of SEQ ID NO: 3 or 4.

Claim 10

44. (Currently Amended) The method according to claim 32, wherein the polypeptide of (a) is encoded by a polynucleotide comprising a sequence selected from the group consisting of:

(i) a nucleotide sequence comprising nucleotides 178 to 2280 of SEQ ID NO: 1 or nucleotides 127 to 2079 of SEQ ID NO: 2;

(ii) a nucleotide sequence encoding the amino acid sequence of SEQ ID NO: [[4]] 3 or 4; and

(iii) a nucleotide sequence encoding an amino acid sequence in which a signal sequence portion is deleted in the amino acid sequence of SEQ ID NO: 3 or 4.